

WHAT IS CLAIMED IS:

1. A method for manufacturing an optical interference display panel, comprising:

5 providing a substrate having a micro electro mechanical structure, wherein the micro electro mechanical structure comprises:

a first electrode, on the substrate;

a sacrificial layer, on the first electrode;

a second electrode, on the sacrificial layer; and

10 a plurality of supports, located between the first electrode and the second electrode;

adhering the substrate to a protection structure with a first adhesive to form a cavity for enclosing the micro electro mechanical structure, wherein a sidewall of the cavity has at least one opening; and

15 removing the sacrificial layer by a release etching process with an etching reagent through the opening to form an optical interference reflection structure.

2. The method of claim 1, wherein a material of the first adhesive
20 comprises spacers, and the spacers keep a predetermined distance between the protection structure and the substrate to prevent the protection structure from damaging the optical interference reflection structure.

3. The method of claim 1, wherein the first adhesive comprises a UV glue
25 or a thermosetting adhesive.

4. The method of claim 1, wherein the method further comprises:

closing the opening after finishing the release etching process.

5 5. The method of claim 4, wherein the opening is closed by filling with a second adhesive.

6. The method of claim 5, wherein the second adhesive comprises a UV glue or a thermosetting adhesive.

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7. The method of claim 1, wherein the protection structure is a flat protection structure or a U-shaped protection structure.

8. The method of claim 1, wherein the protection structure is a U-shaped
15 protection structure, and the opening is positioned on a sidewall of the U-shaped protection structure.

9. An optical interference display panel, comprising:

a substrate;

20 a protection structure situated in parallel with the substrate substantially;

a micro electro mechanical structure having a sacrificial layer between a first electrode and a second electrode of the micro electro mechanical structure;
and

an adhesive, adhering the protection structure to the substrate to form at

25 least one cavity for enclosing the micro electro mechanical structure, wherein a

sidewall of the cavity has an opening for input of an etching reagent used to remove the sacrificial layer and form an optical interference reflection structure.

10. The optical interference display panel of claim 9, wherein the micro
5 electro mechanical structure further comprises:

a plurality of supports, located in the sacrificial layer, for supporting the first electrode and the second electrode.

11. The optical interference display panel of claim 9, wherein the
10 protection structure is a flat protection structure or a U-shaped protection structure.

12. The optical interference display panel of claim 9, wherein the
protection structure is a U-shaped protection structure, and the opening is
15 positioned on a sidewall of the U-shaped protection structure.

13. The optical interference display panel of claim 9, wherein the
adhesive comprises spacers, and the spacers keep a predetermined distance
between the protection structure and the substrate to prevent the protection
20 structure from damaging the optical interference reflection structure.

14. The optical interference display panel of claim 9, wherein the
adhesive comprises a UV glue or a thermosetting adhesive.